

WHAT IS CLAIMED IS:

1. A method for applying solder paste to a circuit board comprising:
covering a circuit board with a first stencil, wherein the first stencil comprises
a first stencil hole;

5 applying a solder paste to a first area of a circuit board through the first
stencil;

covering the circuit board with a second stencil, the second stencil comprises a
second stencil hole and a void enclosure, and wherein the void enclosure covers the
first area and prevents the second stencil from touching the first area; and

10 applying a solder paste to a second area of the circuit board through the second
stencil.

2. The method of Claim 1, wherein applying a solder paste to a first area
comprises forming a solder deposit on the first area, the solder deposit having a
15 deposit height and wherein the deposit height is less than a height of the void
enclosure.

3. The method of Claim 1, wherein the first stencil hole has a first width
and the second stencil hole has a second width, the second width being greater than
20 the first width.

4. The method of Claim 1, wherein the second stencil is operable, while
covering the circuit board, to support a pressure without the second stencil touching
the first area.

25 5. The method of Claim 1, wherein the first stencil further comprises a
plurality of first stencil holes, the first stencil holes having a first width, and wherein
the void enclosure comprises a plurality of pockets, the pockets having a second
width, the second width being greater than the first width.

6. The method of Claim 1, wherein the first stencil further comprises a plurality of first stencil holes, the first stencil holes having a first width, and wherein the void enclosure comprises a plurality of pillars and wherein a distance greater than the first width exists between any two pillars.

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7. The method of Claim 1, wherein the first stencil comprises a first height and wherein the second stencil comprises a second height, the second height being greater than the first height.

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8. The method of Claim 1, wherein the first stencil comprises a first height and wherein the second stencil comprises a second height, the second height being less than the first height.

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9. The method of Claim 1, further comprising:
mounting electrical components to both the first area and the second area; and
heating solder paste applied to the first area and solder paste applied to the second area.

10. A method for applying solder paste to a circuit board comprising:
covering the circuit board with a stencil, wherein the stencil comprises a
stencil hole, wherein the stencil hole has a first width;

5 applying a solder paste across a first area of the circuit board covered by the
stencil;

applying a solder paste to a second area of the circuit board with a needle head
applicator, wherein the needle head applicator includes one or more solder needles,
each solder needle operable to apply a solder deposit of a second width to a specified
point on the circuit board.

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11. The method of Claim 10, wherein the second width is greater than the
first width.

12. The method of Claim 10, wherein the first width is greater than the
15 second width.

13. A system for applying solder paste to a circuit board comprising:
a first stencil including a first stencil hole, wherein the first stencil is operable
to block a flow of solder paste except through the first stencil hole;
a second stencil including a second stencil hole and a void enclosure, wherein
5 the second stencil is operable to block a flow of solder paste except through the
second stencil hole and wherein the void enclosure is operable to prevent the second
stencil from touching an area of a circuit board positioned underneath the second
stencil;
a solder applicator, operable to dispense solder paste; and
10 a stencil alignment module operable to:
position the first stencil over the circuit board;
apply solder paste to a first area of the circuit board through the first
stencil;
position the second stencil over the circuit board so that the void
15 enclosure aligns with the first area; and
apply solder paste to a second area of the circuit board through the
second stencil.

14. The system of Claim 13, wherein the stencil alignment module is
20 operable to apply a solder paste to a first area by forming a solder deposit on the first
area, the solder deposit having a deposit height and wherein the deposit height is less
than a height of the void enclosure.

15. The system of Claim 13, wherein the first stencil hole has a first width
25 and the second stencil hole has a second width, the second width being greater than
the first width.

16. The system of Claim 13, wherein the second stencil is operable, while
30 covering the circuit board, to support a pressure without the second stencil touching
the first area.

17. The system of Claim 13, wherein the first stencil further comprises a plurality of first stencil holes, the first stencil holes having a first width, and wherein the void enclosure comprises a plurality of pockets, the pockets having a second width, the second width being greater than the first width.

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18. The system of Claim 13, wherein the first stencil further comprises a plurality of first stencil holes, the first stencil holes having a first width, and wherein the void enclosure comprises a plurality of pillars and wherein a distance greater than the first width exists between any two pillars.

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19. The system of Claim 13, wherein the first stencil comprises a first height and the second stencil comprises a second height, the second height being greater than the first height

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20. The system of Claim 13, wherein the stencil positioning module is further operable to:

mount electrical components to the both first area and the second area; and

heat solder paste applied to the first area and solder paste applied to the second area.

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